

REMARKS

In the 07/05/02 Office Action, the Examiner entered a restriction between claims 1-11 and 12-17.

Applicant is electing claims 1-11 and cancelling claims 12-17.

The Examiner also rejected claims 5, 6, and 8-10 under 35 U.S.C. § 112. Applicant has cancelled claim 5 and amended claims 6, and 8-10. Applicant has attempted to follow the Examiner's suggestions in amending the claims to overcome the § 112 rejections. If the amendments are found insufficient, it is requested that the Examiner contact the undersigned.

The Examiner also rejected claims 1-4, 7, and 9 as being anticipated by U.S. Patent No. 4,560,598 to Cowan. Applicant has amended claim 1 to incorporate the limitations of claim 5 and submits this amendment overcomes the rejections under § 102 based upon Cowan. The remaining issues concern rejections based upon 35 U.S.C. § 103.

1. Rejections Based Upon Sugimoto.

The Examiner rejected claim 5 as being obvious in view of U.S. Patent No. 4,856,656 to Sugimoto, et al. The Examiner admitted that Sugimoto "failed to teach the outer layer has a higher coefficient of friction and lower density than the inner layer; i.e., the inner layer and outer layers of Sugimoto, et al are arranged opposite to the arrangement of the instant application." Nevertheless, because Sugimoto teaches that a buffering material easily slips over the outer layer, the Examiner believed that it would be obvious to modify Sugimoto such that the inner layer has the lower coefficient of friction ("COF") and the outer layer has the higher COF such that an article can be more easily inserted into or removed from a bag.

However, applicant submits that there are several reasons why a person of ordinary skill in the art would not be led to make the modifications to Sugimoto which are suggested by the Examiner. One problem Sugimoto was attempting to solve was damage to the surface of articles being packaged as a result of rubbing of the article by the polyethylene film surrounding it (see column 1, lines 39-44). Sugimoto's solution was to increase the COF of the inner layer of film such that the film would adhere to the article and not cause rub damage (see column 2, lines 34-39). On the other hand, if the inner layer's COF was decreased, it stands to reason that the rubbing problem Sugimoto was trying to avoid would only be aggravated. Moreover, another goal of Sugimoto's invention was to provide a low COF outer layer which would allow the buffering material to easily slip over the film wrapping the article being packaged. If the Sugimoto layers were reversed as suggested by the Examiner, then the higher COF would make it much more difficult to slip the buffering material over the film. Of course, this result is exactly what Sugimoto was attempting to *avoid*.

Applicant submits that the modifications which the Examiner is proposing to make to Sugimoto would clearly destroy the intended functionality of the Sugimoto film. Rather than reducing rub damage to articles as Sugimoto intended, the Examiner's proposed modification would increase damage. Likewise, rather than making it easier for the buffer material to slip over the film, the Examiner's proposed modification would make it more difficult. As the Examiner is aware, MPEP §2143.01 prohibits modifications of references where such modifications would render the prior art being modified unsatisfactory for its intended purpose. Therefore, the proposed modification of Sugimoto is clearly improper and the obviousness rejection of original claim 5 (now amended claim 1) should be withdrawn.

2. Rejections Based Upon Cowan.

The Examiner further rejected claim 5 as being an obvious modification of Cowan. As the Examiner noted, Cowan does not teach an outer layer having a COF of 0.3 to 0.6, but only a COF of at least 0.8. Nevertheless, the Examiner believed that it would be obvious to modify the Cowan outer layer to have a COF of 0.3 to 0.6.

The problem Cowan was attempting to resolve was how to prevent plastic bags filled with materials from slipping relative to one another during stacking or transportation. Cowan's solution was to produce a bag having an outer layer with a COF of *at least* 0.8 and preferably an even higher COF (see column 3, lines 23-25). Cowan accomplishes this by adding an isobutylene polymer to the resin mixture to be extruded.

There are at least two reasons why the Cowan reference would not suggest reducing the COF of its film to the 0.3 to 0.6 range claimed by applicant. First, applicant's investigation into the use of isobutylene as a tackifier indicates that when isobutylene is added to polyethylene films to increase their COF, it is not practically possible to obtain films with a COF as low as 0.6. If the Examiner has reasons for believing differently, then applicant request the Examiner provide the basis for those reasons. Second, there is no clear basis for believing that Cowan could effectively function for its intended purpose with a COF as low as 0.6. The minimum COF Cowan specified to prevent plastic sacks from slipping relative to one another was 0.8. What in Cowan or any of the other references indicates that a COF of 0.6 or less could accomplish this purpose? Certainly the particular COF needed to prevent plastic sacks from slipping relative to one another is not something that is notoriously known in the art. Since the minimum effective COF specified in Cowan is 0.8 and since no other reference discloses that a COF less than 0.8 will have

utility for Cowan's purposes, there can be no suggestion in the cited references to modify Cowan's film to have a COF between 0.3 and 0.6. Applicant respectfully submits that the Examiner has not established a prima facie case of obviousness based upon the Cowan reference.

In concluding that applicant's COF range of 0.3 to 0.6 was an obvious modification of Cowan, the Examiner cited *In re Boesch*, 205 USPQ 215 (CCPA 1980), for the proposition that "discovering an optimum value of a result effective variable involves only routine skill in the art in absence of unexpected results." However, reviewing the facts of the *Boesch* case illustrates how that proposition may have been properly applied to the *Boesch* invention, but does not apply to the present invention based on the art cited in the last Office Action. In *Boesch*, the invention was a nickel based alloy having certain percentage ranges of carbon, cobalt, chromium, molybdenum, titanium, aluminum, iron, and boron. The key claim limitation was that these elements were balanced to provide an " N_v value not in excess of about 2.35" (where the N_v value refers to the average electron vacancy concentration per atom in the matrix of the alloy). The lower N_v value was disclosed as reducing the precipitation of embrittling phases of the metal. However, the *Boesch* examiner had cited references disclosing ranges of all constituent metals which overlapped *Boesch*'s claimed ranges. Moreover, the examiner asserted, and the CCPA agreed, that other publications showed that as early as 1938, it was known that the higher the N_v value, the higher the chance for precipitation of embrittling phases. It was only with this prior art background that the CCPA held "discovering an optimum value of a result effective variable involves only routine skill in the art."

However, what the cited references teach in the present application is much different from what the prior art taught in the *Boesch* case. In the present application, Cowan teaches a minimum COF of 0.8 and suggests even higher coefficients of friction are preferred. Thus, Cowan suggests moving in a direction

that takes his polymer film further away from applicant's claimed polymer film. This is distinguishable from the *Boesch* situation where the prior art taught lowering the N_v value in the same manner and for the same purposes as the *Boesch* inventor. The facts of the *Boesch* case differ greatly from those of the present Office Action and it would clearly be unreasonable to blindly apply the holding of the *Boesch* case to the present claims.

Additionally, other cases cited by the MPEP indicate that the claimed invention should not be considered merely an obvious improvement over the Cowan reference. For example, *Titanium Metals Corp. of America v. Banner*, 227 USPQ 773 (Fed Cir. 1985) is cited in MPEP §2144.05 for the proposition that "a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties." In the present application, we are dealing with coefficients of friction with a possible range of 0.0 to 1.0. The highest claimed COF is 0.6. On the other hand, the lowest COF disclosed in Cowan is 0.8. This is a 20% difference between the extremes of the claimed invention and Cowan. As a point of reference, the *Titanium Metals* case dealt with a claimed alloy of 0.8% nickel and 0.3% molybdenum while the cited reference disclosed an alloy of 0.75% nickel and 0.25% molybdenum. Applicant agrees that one of ordinary skill in the art might expect two alloys having 0.05% difference in metal concentrations to have the same properties. However, it is not reasonable to expect a plastic film with a minimum COF of 0.8 to have the same properties as a polymer film with a maximum COF of 0.6. Certainly Cowan does not evidence such an expectation. In disclosing coefficients of friction suitable for his purpose of preventing stacked plastic sacks from slipping relative to one another, Cowan implies that 0.8 is the minimal acceptable COF. Why would a person of ordinary skill in the art expect a 20% lower COF of 0.6 to have the same

properties as Cowan's polymer film?

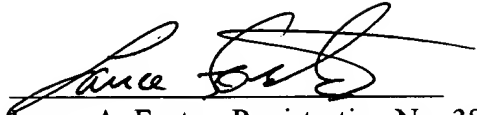
More importantly, for the purposes of the present application, a polymer film with a COF of 0.8 does not have the same or similar properties as a polymer film with a COF of 0.6. As evidenced by the attached declaration of Ronald A. Mason, furniture items placed in polymer bags will slide against other furniture items in polymer bags during storage or transportation of the furniture items. A COF of greater than 0.6 results in too great of a tendency for films on adjacent furniture items to grip one another and tear when there is relative movement between the furniture items. This is particularly true as the COF approaches 0.8. Therefore, the Mason declaration provides further convincing evidence that the claimed COF range of 0.3 to 0.6 should not be considered close to Cowan's range of over 0.8 and that a person of ordinary skill would not expect polymer films having these different ranges to have the same properties. Therefore, the COF range disclosed in Cowan could not suggest applicant's claimed range.

For all of the reasons given above, applicant respectfully submits that the claimed COF range of 0.3 to 0.6 cannot be considered an obvious modification in view of Cowan's minimum COF of 0.8.

Applicant has also amended claim 11 to now include the COF limitations of original claim 5 and believe the above arguments should be equally applicable to claim 11. Furthermore, applicant has added new claims 18 and 19 which include the 0.3 to 0.6 COF limitation and should be patentable for the reasons given above. Therefore, applicant submits that all rejections have been overcome and requests the claims as amended be allowed to issue.

Respectfully Submitted:

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